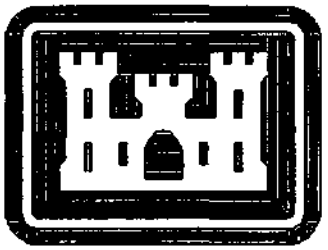


U.S. Army Corps of Engineers
Rapid Response Program Office

Environmental Protection Agency
Region VIII

Final Performance Work Statement for Vasquez Boulevard I-70 Residential Lead and Arsenic Impacted Soil Removal Denver, CO

DACA45-03-R-0052

EPA Region VIII

March 17, 2004

Table of Contents

Final Performance Work Statement for Vasquez Boulevard I-70
Residential Lead and Arsenic Impacted Soil Removal
Denver, CO
DACA45-03-R-0052
EPA Region VIII,
March 17, 2004

1. *Introduction.* EPA Region VIII, Denver has requested that Rapid Response Program Office conduct residential impacted soil removal and replacement to be continued for the Vasquez Boulevard I-70 Superfund Site. This work will implement the remedial action requiring removal and replacement of lead and arsenic contaminated residential soils which have been found to have concentrations above the action levels within Operable Unit 1 (OU1) of the Vasquez Boulevard/Interstate 70 Superfund Site (VB/I70 Site). This performance Work Statement is to complete soil removal and replacement at 70 properties that exceed the cleanup action levels and are located within the boundaries of the VB/I70 Site.

1.1 Background. Extensive soil sampling of the majority of the residential areas was conducted during the Remedial Investigation. Data from the Remedial Investigation was used to calculate arsenic and lead exposure concentrations for each yard. These exposure concentrations were compared with the residential soil remedial action levels established by US EPA in the Record of Decision. The action levels are 70 mg/Kg for arsenic and 400 mg/Kg for lead. The levels of lead and arsenic represent a potential hazard to human health.

1.1. Site Description. The VB/I70 Site covers an area of approximately four square miles in north-central Denver, Colorado. For the purpose of investigation and remediation, the site has been divided into three operable units. The residential soils are known as OU1. The locations of the former Omaha & Grant Smelter and Arco Smelter are known as OU2 and OU3, respectively. OU1 is composed of a number of the City of Denver neighborhoods that are largely residential, including Swansea/Elyria, Clayton, Cole and portions of Globeville. Approximately 4,000 residential properties are located within OU1. A site map is provided in Appendix A.

1.2. Project Request. The U.S. EPA, Region VIII, Superfund Program, has requested that the USACE, Omaha District, Rapid Response Program Office, remove and replace impacted soil for the residential properties within the OU1 on 70 properties. The Omaha District accepted this project and will issue a Task Order to Project Resources Incorporated. This Performance Work Statement identifies the plans, fieldwork and necessary documentation required to complete this project as a site-specific contract with the USACE Rapid Response Program. A construction act, cost plus, fixed fee contract will be issued to Project Resources Inc. All work shall be consistent with the attached requirements, unless otherwise approved. The Rapid contractor is tasked with providing the labor, materials, equipment, miscellaneous, and analytical services necessary to satisfactorily complete this performance work statement.

1.3. Project Goal. Contractor-government teamwork and partnering are developed and maintained such that the project yields timeliness, economy, and quality and US EPA VIII expectations are maintained throughout the duration of the project.

1.4. Subcontract Review. USACE shall review and approve all subcontractor language before it is submitted to the subcontractors. Any change orders to the subcontract shall likewise be reviewed and approved by USACE prior to its issuance to the subcontractor. Subcontractors shall provide unit prices for their work. At a minimum, unit prices for truck rental, sample analyses, disposal, sod placement and watering, backfill material, etc shall be provided. The subcontractor's foreman shall participate in daily meetings concerning job progress.

1.5. Permits, Clearances, and Licenses. The Contractor shall be responsible for obtaining all permits, clearances, and licenses needed for the project. The Contractor shall obtain, at a minimum, signed utility clearances prior to any intrusive work, commercial drivers licenses for truck drivers, and develop shipping documents or manifests for transport vehicles, to transport waste from the impacted properties to the staging area. The Contractor shall be in receipt of signed right of access agreements or shall obtain them prior to any intrusive work.

2. Contractor Tasks. Major tasks for the residential impacted soil removal and replacement include: site coordination activities, site preparation, homeowner coordination, sampling gardens, excavation, soil transportation and disposal and staging of lead/arsenic contaminated soils, backfill, site restoration including sod/seed, gardens and flower beds, and miscellaneous ground cover, sampling and analysis activities, and performing health and safety practices. The Contractor shall develop the plans, cost proposal and perform the work based on the following tasks:

2.1. Task 1 – Construction Work Plan and Revised Health and Safety Plan. The work will be completed in accordance with the "Remedial Action Work Plan for OU1 for the VB/I70 Superfund Site" dated March 2003. All variances from the work plan will be documented and approved by EPA. The contractor shall provide technical support personnel such as regulatory specialists, chemist, industrial hygienist, and T&D coordinators to support the project needs at various times. The contractor shall provide experienced personnel in the following areas: government contract administration, procurement, property, project accounting, and HTRW planning.

The contractor shall update the existing Health and Safety Plan (HASP): "Non time Critical Removal Action for OU1 VB I70 Superfund Site, Denver CO," dated August 3, 2003 by Project Resources Inc. The Contractor shall address health and safety considerations, propose equipment, labor, vendors, materials, and subcontractors, and describe sampling and analysis activities within the plan such that the following activities are sufficiently described:
The contractor shall have the organization in place to manage personnel, materials, and equipment such that daily field changes are accommodated without unsatisfactory delays.

The contractor shall provide field construction supervisors who have verifiable experience working on residential HTRW removal actions and the communication skills to successfully maintain project focus given diverse and challenging circumstances. The contractor shall provide equipment operators, general laborers, health and safety personnel (who have already successfully implemented USACE EM 385-1-1, 3 November 2003 requirements in addition to other safety requirements) to execute various work phases.

Continue air monitoring in place on the previous contract DACA45-01-D-0001 Task Order #14; 3-days a month a property will be monitored during excavation hours. In addition, at lead/arsenic impacted soil stockpiles or staging areas one upwind and downwind air sample shall be taken.

2.1.1. Chemical Sampling and Analysis Plan (CSAP). The Contractor shall *follow the Chemistry Performance Work Statement provided in Appendix C for sampling and* analysis activities. Major tasks include air sampling, confirmation testing, waste characterization, and clean certification for fill material. The Contractor shall develop a waste characterization sampling plan such that long-term defensibility for disposed of wastes at the landfill(s) is maintained.

2.1.3 Contract Agreements. The Advanced Agreements shall be incorporated into the contract.

2.2 Task 2 – Cost Proposal. The Contractor shall not be reimbursed for expenditures incurred during the Cost Proposal or Site-Specific Advance Agreements' preparation and negotiation. The Contractor shall provide a cost proposal based on the Performance Work Statement that contains the labor, materials, equipment, analytical, subcontractor cost, and miscellaneous costs to complete this scope of work. At a minimum for subcontracts greater than $ 10,000, the Contractor shall provide three independent quotes and justification of selection. For subcontracts greater than $25,000, the Contractor shall submit Subcontract consent packages for government approval. Subcontracts shall be firm fixed, with unit prices. Rental equipment shall be rented by the month, though daily rental rates shall be provided in the daily cost tracking. The Contractor shall identify and exercise applicable tax exemptions and identify and pay applicable sales and use tax for this project. The work shall comply and adhere to all applicable federal, state, and local laws and regulations and Applicable, Relevant or Appropriate Requirements (ARARs). The Cost Proposal shall be submitted to Pat Overgaard, USACE Contracting, CENWO-CT, 106 S. 15th St, Omaha, NE 68102-1618. In generating the proposal, the Contractor shall assume the following and other lessons learned from previous work at VB I70:

1. An average yard is 3,566sf or 132 cubic yards (160 tons)
2. 70 properties will require removal
3. Lead/arsenic impacted soil will be removed, staged, and disposed of as non-RCRA regulated, non-hazardous waste in a subtitle D facility.
4. 100% of the excavated soil in tons will be needed for clean backfill.
5. 6-10 hrs days will be worked for the duration of the project.

2.3 Task 3 - Mobilization and Crew Rotation. The Contractor shall mobilize to the project site necessary equipment, personnel, subcontractors, material, etc to successfully complete the requirements of this Performance Work Statement. The Contractor shall perform a phased mobilization approach so as to maintain work efficiency and minimize downtime and costs. After contract award, the Contractor shall mobilize the Site Coordination Team to schedule affected property owners for removal to begin site preparation. Crew rotations will be planned in advanced and per the contract CMP's.

2.4 Task 4 - Site Administration and In-directs. The contractor shall list administrative type personnel at this site. The list should include title, number of hours, and wage rate. This activity should also include the equipment on site for the entire on site project duration. This includes labor for the on-site cost accountant and the site supervisor; equipment staying through the on-site portion; and it includes trailers, furniture, office equipment, port-o-johns, trash removal services, etc.

2.5 Task 5 – Lodging and Per Diem. This cost proposal task includes the lodging and per diem associated with the work on-site.

2.6 Task 6 – Home Office Support. The contractor shall list personnel away from the project site who supported this particular project. The list should include title, number of hours, and wage rate of each person connected with this project. This includes labor for the project manager, technical support and administrative personnel.

2.7 Task 7 - Final Report. The Contractor shall submit a Final Report within three weeks of completion of the on-site work.

2.8 Task 8 - Project Close Out. The Contractor shall closeout all purchase orders and subcontracts. The contractor will finalize the audit and submit a final zero balance bill for project closeout by DCAA accounting.

2.9 Task 9 – Site Set-up/Maintenance. The Contractor is currently mobilized at the existing Globeville staging area, on ASARCO property. Trailers, utilities, electric, phones, rentals will all be renewed under this TO so billing is separate and distinguishable. The Contractor shall procure up to 1,000 cubic yards of fill material and stage it at the site prior to any intrusive activities. The staging area shall provide trailer for field workers and site coordination team; and a trailer for USACE, the field manager, and the project accountant. This task tracks costs of maintenance work that is needed intermittently for equipment or roads. Telephone, fax, and copying service shall be required for the USACE trailer.

2.10 Task 10 - Site Coordination, Pre-Excavation (including garden/flower bed sampling). Access Agreements and Property Owner Authorization. The contractor shall utilize the existing VB I70 right of access agreements and property owner authorization, approved by the U.S. EPA, to perform any removal work on affected establishments. The Contractor shall reference Appendix B. This task includes the costs for Site Coordination. The site coordination team will:

- Visit, in person, with property owners and possibly tenants of affected establishments to coordinate and schedule upcoming removal activities and manage expectations. Site Restoration forms shall be developed for this purpose and signed by the property owner during the visit.
- Obtain signed right of access agreements per establishment.
- Garden/flower bed sampling. Perform garden/flower bed sampling at properties where home owner's request; per the "Remedial Action Work Plan for OU1 for the VB/I70 Superfund Site".

- Perform property specific design where necessary for documentation.
- Perform photo and video documentation prior to any intrusive activities. The Contractor may use digital cameras; but the site trailer, US EPA, and USACE shall have hard copies of the documentation.
- Develop photo albums which describe the property before removal. Names and addresses of affected properties shall be incorporated into the album.
- Obtain signed utility clearances per affected establishment.
- Generate daily schedules for the removal crews such that the crew workload remains constant and downtime is minimized.
- Participate in daily coordination meetings at the end of the day.

The Site Coordination Team shall make initial contact with the property owners, communicate removal action operations, and address concerns. The property owner and government representative(s) shall perform a "walk through" of the affected areas. The government representative shall request the property owner remove interfering objects (swing sets, bird baths, etc) prior to the removal. If gardens, bushes, trees, etc. interfere with the removal, the government representative shall ask the owner if they wish removal of soil beneath such objects, as no replacement will be planned. The Site Restoration Agreement shall document all responses and shall be signed by the property owner prior to commencement of intrusive work.

These personnel shall possess highly effective communication skills to manage diverse expectations and concerns. These personnel are responsible for communicating U.S. EPA removal policies, but do not have the authority to make agreements beyond those policies (e.g. upgrade anyone's property). In the event of conflict or uncertainty, the Site Coordination Manager shall enlist the input of USACE. These personnel shall also have proficient computer skills to perform word processing tasks and develop spreadsheets.

2.11 Task 11 – Removal of Impacted Soil. The Contractor shall follow "Remedial Action Work Plan for OU1 for the VB/I70 Superfund Site". The Contractor shall perform the work in such a manner so as to minimize disturbance to the affected property. To the degree economical, all equipment shall be rubber tracked, tired so as to minimize damage. The Contractor shall identify utilities prior to intrusive work and make every effort to avoid impacting those utilities, including hand digging to expose utilities. The Contractor shall provide the operators, truck drivers, equipment and materials to remove contaminated soils to a depth of 12-inches bgs.

2.12 Task 12 – Transportation, Disposal and Staging Waste Soils. The Contractor shall plan the transportation work to the staging area such that the following concerns are addressed. The soil is a hazardous substance and may require shipping papers, marking, labeling, packaging and placarding. The project assumption is the removed soils will be staged at the ASARCO Globe Plant facility and then will be transported to an EPA approved landfill.

2.13. Task 13 - Sampling and Analysis. The Contractor shall perform sampling and analysis consistent with the Chemistry Performance Work Statement and "Remedial Action Work Plan for OU1 for the VB/I70 Superfund Site".

2.14 Task 14 – Backfill and Restoration. The Contractor shall restore all impacted properties to original conditions as is possible and follow the "Remedial Action Work Plan for OU1 for the VB/I70 Superfund Site". The final grading of the completed work shall be accomplished in such a manner as to restore disturbed areas, including lawns, landscaping ditches, and areas adjacent to roadways as above plan allows. Note the City of Denver has major restrictions on what is allowed on the "aprons" or the portions of the properties adjacent the street. The disturbed areas shall be graded and shaped to a condition suitable for sod, hydroseeding finish planting. The Contractor shall maintain the natural drainage patterns. Soil used for backfilling shall be capable of meeting 85% compaction without addition of water and with use of the proposed equipment. The Contractor shall place the backfill so as to maintain density requirements, desired run off contours, and as close to original conditions as possible. Pavements that are impacted shall be restored.

2.15 Task 15 – Sod/Seed Landscaping. The Contractor shall install and maintain sod/seed per "Remedial Action Work Plan for OU1 for the VB/I70 Superfund Site." The Contractor shall maintain sod and water sod for up to 30 days. The Contractor shall be responsible for sod replacement at no additional cost to the government when sod does not survive the 30-day timeframe. Repair items on punch lists. Include landscaping maintenance costs.

2.16 Task 16 – Garden Flower Beds Landscaping. The Contractor shall replace flower beds per "Remedial Action Work Plan for OU1 for the VB/I70 Superfund Site."

2.17 Task 17 – Miscellaneous Landscaping and Restoration. The Contractor shall install alternate landscape materials where homeowner allows of gravel, rubber chips, or mulch.

2.18 Task 18 – Post Construction Maintenance. Unanticipated maintenance arising after the property completion, including warranty issues, call backs, and construction problems.

2.19 Task 19 – Site Coordination, Follow-up. This task includes the costs and team for Site Coordination. This team will:

- Perform photo and video documentation after intrusive activities, after contaminated soil is removed, and after the site is restored. The Contractor may use digital cameras; but the site trailer, EPA, and USACE shall have hard copies of the documentation.
- Develop photo albums which describe, per establishment, before removal, after exhumation, and after final site restoration. Names and addresses of affected establishments shall be incorporated into the album.
- Develop Residential Remediation Agreement (Final completion agreement) forms and obtaining signature(s) for each site after site restoration is complete.
- Generate daily schedules for the site restoration crews such that the crews work load remains constant and downtime is minimized.
- Participate in daily coordination meetings at the end of the day.
- Develop per affected establishment a file which contains: photo documentation (floppy is satisfactory for this purpose), right of access agreement, utility clearances, site restoration agreements, remediation agreements, and any other pertinent information.

2.20 Task 20 – Site Teardown and Demobilization. Restore trailer site area, and any staging areas to former condition. Demobilize crew and equipment.

2.21 Task 21 – Air Monitoring. Air monitoring is detailed in the March 2003 "Remedial Action Work Plan for OU1 for the VB/170 Superfund Site". Air monitoring shall be subcontracted to a specialist company in the field. The air monitoring subcontractor shall report all results directly to the USACE representative. The air monitoring subcontract shall be reviewed by USACE Industrial Hygienist before award of subcontract.

3. Submittals. Documents submitted in performance of this Delivery Order shall be prepared on commercial grade bond paper. Documents shall be mailed via a carrier service that will provide overnight service, such as Express Mail. The Contractor shall prepare and submit the following documents.

3.1. Cost Proposal. The Contractor shall provide a cost proposal that contains the labor, materials, equipment, analytical, subcontractor cost, and miscellaneous costs to complete this scope of work. The contractor shall not be reimbursed for expenditures incurred during the Cost Proposal or the Site Specific Advance Agreements' preparation and negotiation. The Task Order Cost Proposal shall be prepared based on this Scope of Work including references. This task order shall utilize construction wage rates. A copy of these wage rates is presented in Appendix D Wage Rates. The cost proposal shall provide a timed-phased breakdown for each "TASK" based on Direct Costs including labor, equipment, materials, subcontracts, and indirect costs including overhead and G&A expenses. The cost proposal shall be submitted in a format that matches previously discussed tasks. For subcontracts greater than $25,000, the Contractor shall submit Subcontract consent packages for government approval. Rental equipment shall be rented by the month, though daily rental rates shall be provided in the daily cost tracking.

3.2. Construction Work Plans. Submit the following documents within a week of the cost proposal. Work plans shall be distributed according to Table 1. Submittals.

3.2.1. Schedule
3.2.2. Revise existing Site Safety and Health Plan (SSHP).

3.3. Daily Submittals. Daily submittals shall be submitted to the USACE on-site representative at the close of business, daily. All daily submittals shall be available for electronic transmittal to the Omaha District Offices at the close of business, daily. Daily submittals include:

3.3.1. Rapid Response Quality Control Daily Report. This form is provided in **Appendix D** - Project Forms.

3.3.2. Rapid Response Daily Work Order. This form is provided in Appendix E Project Forms.

3.4. Weekly Status Report. The Contractor shall submit a weekly progress no later than 7:00 A.M. Central Standard Time the following Tuesday after the week which is being reported.

The reports will be e-mailed or faxed to the Project Manager. The Weekly Status Report shall be transmitted weekly from the receipt of "seed" money until final on-site demobilization. The reports shall include projected home office charges for the upcoming week in addition to actual costs for home office charges for the previous week for the duration already stated. At that time the report shall be transmitted bi-weekly until final payment is made. The Weekly Status will include the following information:

3.4.1. Project name.

3.4.2. Date of report.

3.4.3. Name, title, telephone number, fax number, address, and company name of the person completing the report.

3.4.4. Summary of work performed for the project during the report period, both on site and offsite.

3.4.5. Explanation of any deviations from the performance work statement and/or the Work plan (including modifications and schedule slippages).

3.4.6. Discussion of all problems encountered.

3.4.7. Recommendations.

3.4.8. Key personnel changes.

3.4.9. Work anticipated to be performed the following week.

3.4.10. Percent of fieldwork complete.

3.4.11. Percent of project complete.

3.4.12. Conversation records with regulatory agencies.

3.4.13. Tabulated waste handling information including samples taken, results, transportation plans, disposal facility, etc. if applicable.

3.4.14. Submittal of Hazardous Waste Manifests, Waste Profile Sheets, and Land Disposal Restriction forms that were signed and submitted to the laboratories, disposal facilities or transporters during the week.

3.4.15. Weekly cost summary, which includes a breakdown of daily and weekly expenditures, as well as a total of expenditures to date.

3.5. Final Report. Draft and Final copies of the Project Report shall be submitted. While all submittals should be error-free, an extra effort shall be made to provide an error-free Final Project Report. The Draft Project Report shall be submitted within a 3 weeks of site demobilization. The Project Report shall include (if applicable) but not limited to:

3.5.1. Summary of Work Performed. Summary of work performed including, but not limited to:

3.5.1.1. Executive summary. The Executive Summary shall include the project objectives and narratives discussing how those objectives were met. If objectives were not met, then a discussion reconciling the deviations shall be provided.

3.5.1.2. Narrative of the Scope of Work (including project objectives, mobilization and demobilization, site setup, site operations);

3.5.1.3. Safety;

3.5.1.4. Quality control;

3.5.1.5. Recommendation, lessons learned;

3.5.1.6. Conclusions;

3.5.1.7. Any other unique or special tasks performed or situations documented.

3.5.2. **Supporting Data.** The tabulation of criteria, data, circulations, etc., which are performed but not included in detail in the report shall be assembled as appendices. Criteria information provided by the Omaha District need not be reiterated, although it should be referenced as appropriate. The Appendices shall include but not be limited to:

3.5.2.1. The final Performance Work Statement.

3.5.2.2. Completed permits and verbal conversation records concerning any permitting.

3.5.2.3. Licenses.

3.5.2.4. Hazardous Waste Manifests, Waste Profile Sheet, shipping documents, Land Disposal Restriction Certification and Notification, Federal and State Annual and Biennial reports, TSCA Annual Reports, Certifications of Disposal for PCBs and Exception Reports.

3.5.2.5. Rapid Response Daily Work Order.

3.5.2.6. Rapid Response Quality Control Daily Report.

3.5.2.7. Sampling and Analysis Documentation and Results.

3.5.2.8. Chain-of-Custody Records.

3.5.2.9. Photo Documentation.

3.5.2.10. List of visitors.

3.5.2.11. Project Points of Contact address and phone (including Site Manager, T&D Contractors, Subcontractor names, USACE-PM, and Customer.

3.5.2.12. Survey reports and backup notes.

3.5.2.13. Completed Verbal Conversation Records especially ones that either impact the Scope of Work, Cost Proposal, or Final Report.

3.5.2.14. Finalized versions of the transportation and disposal and the analytical results summary tables.

3.5.2.15. Weekly reports.

3.6. **Partial Submittals.** Partial submittals will not be accepted unless prior approval is given.

3.7. **Covers Letters.** A cover letter should accompany each document and indicate the project, project phase, the date comments are due, to whom comments are to be submitted, the date and location of the review conference, etc., as appropriate. (Note that, depending on the recipient, not all letters will contain the same information.) The contents of the cover letters should be coordinated with the PM prior to the submittal date. The cover letter shall not be bound into the document.

3.8. **Covers.** The report covers shall be durable binders, which hold pages firmly while allowing easy removal, addition, or deletion of pages. A report title page shall identify the report title, the Corps of Engineers and the date.

4. **Revisions and Addenda.** Review comments issued prior to Government approval shall be incorporated by revising and reissuing affected pages. If major revisions are necessary, the entire Plan shall be resubmitted. Minor changes affecting only a few pages may be made by

addenda sheets. The affected pages shall have the revision number and date of correction on the bottom right corner of the page.

Any changes to the project work plan shall be accompanied by a cover sheet with a list of pages that have been revised. The revised pages that the Contractor issues shall cover any additions or changes to the plans or reports. The addendum for the project plan shall be issued prior to the commencement of work for that phase.

5. Project Management. The Contractor shall assign an employee who will serve as the Project Manager (PM). This individual will oversee the coordination of the entire project, and coordinate with the USACE-PM. The PM will be named by the Contractor and approved by USACE.

6. Security. The Contractor shall maintain and secure the site during all site operations.

7. Review of Progress and Technical Adequacy. At any appropriate time, representatives of the Contracting Officer (CO) may review the progress and technical adequacy of the Contractor's work. Such review shall not relieve the Contractor from performing all contract requirements, except as may be waived by written instructions. The Contractor, under this contract, will interpose neither objection nor restriction to the Contracting Officer's designation of a Contractor for the purpose of reviewing the adequacy and corrections of the work performed under this contract.

8. Conference Notes, Annotated Comments, and Confirmation Notices.

8.1. Conference Notes. The Contractor shall be responsible for taking notes and preparing the reports of all conferences, if required. Conference notes shall be prepared in typed form and the original furnished this office (within seven (7) work days after date of conference) for concurrence and distribution to all attendees. This report shall include the following items as a minimum.

8.1.1. The date and place the conference was held with a list of attendees. The roster of attendees shall include name, organization, and telephone number.

8.1.2. Comments made during the conference, decisions affecting criteria changes, must be recorded in the basic conference notes. The conference notes should document any augmentation of written comments.

8.2. Annotated Comments. Written comments presented by the reviewers of the project work plans, project reports, conferences, etc. shall be attached to each final submittal with the action noted. Annotated comment action shall be "A" for an Approved comment, "D" for a Disapproved comment, "W" for a comment that has been Withdrawn, and "E" for a comment that has an Exception noted. In addition, brief written responses to comments shall be added where appropriate.

8.3. Confirmation Notices. The Contractor shall be required to provide a weekly record

of all discussions, verbal directions, telephone conversations, etc., participated in by the Contractor and/or his representatives on matters relative to this contract and the work. These records, entitled "Confirmation Notices" shall be numbered sequentially and shall fully identify participating personnel, subject discussed, and any conclusions reached. The Contractor shall forward to the USACE-PM a reproducible copy of said confirmation notices.

9. Applicable Publications. Work performed shall be consistent with this Performance Work Statement and with the following guidelines and references and in compliance with all applicable regulations and standards including, but not limited to, those listed below. In the case that these requirements are conflicting, the one that offers the greatest protection shall be followed.

9.1. Most recent version of the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, November 2003

9.2. Design Specifications and Drawings.

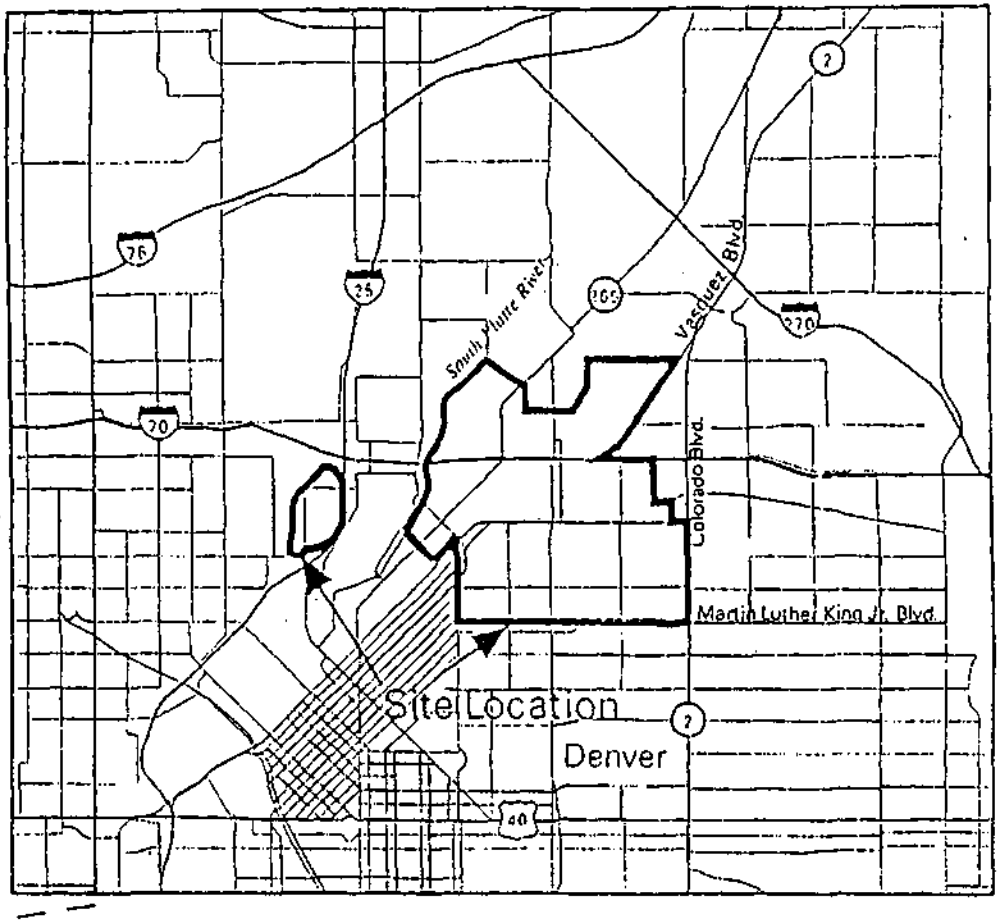
10. Attached Requirements. All field, laboratory, and reporting requirements associated with this delivery order shall be completed in accordance with the appendices listed below. If conflicts in specifications or methodology exist between the attached requirements, the Contractor shall immediately notify the USACE-PM for clarification. Conflicts between this Performance Work Statement and those desired by the Contractor shall be brought to the attention of the USACE-PM for clarification and approval.

10.1. Health and Safety Instructions. Refer to Appendix B - Health and Safety Instructions for the health and safety requirements applicable to this project.

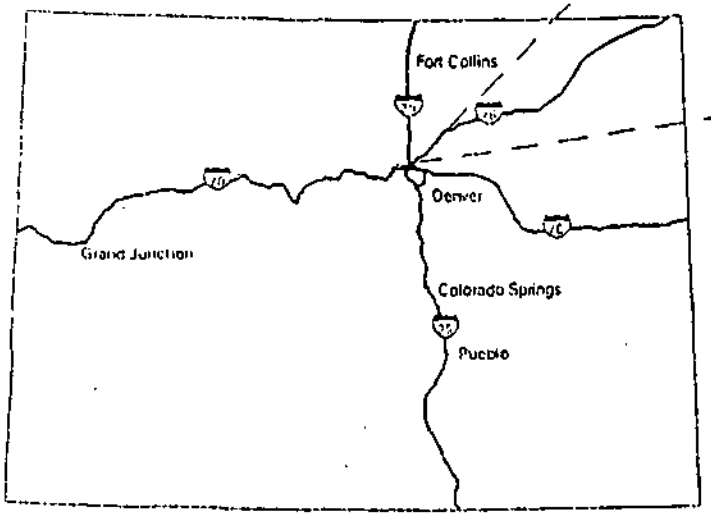
10.2. Chemistry Instructions. Refer to Appendix C – Chemistry Instructions, for information necessary in CSAP.

Appendix A
Site Map

31-JUL-2002 GRA: N:/ARCPRJ2/010107/GRA/LOC_8X11.GRA * AML: N:/ARCPRJ2/010107/AML/LOC_85X11.AML



VB/I70 OU1 VICINITY



COLORADO

N

U.S. EPA REGION 8
VASQUEZ BOULEVARD/
INTERSTATE 70 SITE OPERABLE UNIT 1

Figure 1 –1

Site Location Map

PROJECT: 01-0107x-1	DATE: JULY 31, 2002	
REV: 0	BY: ALB	CHECKED:

Appendix B
Health and Safety Instructions

Health and Safety Instructions
Vasquez Boulevard I-70 Removal Action
Denver CO

1. General. The Rapid Response Contractor responsible for the tasks defined by this scope of work shall review all information provided and develop the necessary documents that contain the health and safety criteria, procedures, and practices sufficient to protect on-site personnel, the environment, and potential off-site receptors from the chemical and physical hazards particular to this site. The Contractor shall utilize the services of a Certified Industrial Hygienist (CIH) experienced in hazardous waste site operations to oversee the development and implementation of the health and safety documents required by this section. If the information made available is insufficient to allow the Contractor to develop these documents, a description of all additional information required shall be prepared and submitted to the Contracting Officer (CO).

2. Regulatory Requirements. All site investigation activities and health and safety documents required by this scope of work shall comply with and reflect the following regulations and appropriate guidance publications, as a minimum:

2.1 Federal Acquisition Regulation, F.A.R. Clause 52.236-13: Accident Prevention.

2.2 U.S. Army Corps of Engineers (USACE), Safety and Health Requirements Manual, EM 385-1-1 (November 2003).

2.3 Occupational Safety and Health Administration (OSHA) Construction Industry Standards, 29 CFR 1926, and General Industry Standards, 29 CFR 1910; especially 29 CFR 1926.65 - "Hazardous Waste Operations and Emergency Response", 29 CFR 1910.1000 - "Air Contaminants", 29 CFR 1926.650-.652 - "Excavations" and 29 CFR 1926.62, "Lead".

2.4 NIOSH/OSHA/USCG/EPA, "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities", October 1985.

2.5 Other applicable Federal, State, and local safety and health requirements.

3. Documents. The following health and safety documents are required to be developed under this scope of work. Avoid providing material of a general nature, not specifically related to this project or site. Information readily available in standard texts should be repeated only to the extent necessary to meet the requirements of this scope. The Safety and Health Program will contain general information required by the referenced OSHA standards and EM 385-1-1 that is applicable to all hazardous waste activity efforts performed by the contractor. The Site Safety and Health Plan should be a brief document addressing only site-specific safety and health requirements and procedures based upon site-specific conditions. Duplication of the general information contained in the Safety and Health Program is unwanted.

3.1 Safety and Health Program. All contractors and their subcontractors performing on-site activities at hazardous waste sites are required by regulation to develop and maintain a written Safety and Health Program in compliance with OSHA standard 29 CFR 1926.65(b)(1) through (b)(4). Written certification that such a program has been prepared and implemented shall be submitted to the CO as a preface to the required Site Safety and Health Plan (SSHP). This program, including updates, shall be made available to the CO in its entirety upon request. Agreements under the Rapid Response Contract have fulfilled this requirement.

3.2 Contractor Site Safety and Health Plan (SSHP). The Site Safety and Health Plan required by 29 CFR 1926.65(b)(4) shall be prepared by the Contractor and submitted to the Contracting Officer for review and approval prior to the commencement of any on-site work activity to be performed by the Contractor and/or his subcontractors. This SSHP shall describe the health and safety procedures, practices, and equipment to be implemented and utilized in order to protect affected personnel from the potential hazards associated with the site-specific tasks to be performed.

The level of detail provided in the SSHP shall be tailored to the type of work, complexity of operations to be accomplished, and hazards anticipated. **It is anticipated that this project will involve the various tasks associated with excavation and disposal of soil contaminated with lead and arsenic, and restoration of excavated areas. The site consists of a residential area.** All topics required by OSHA standard 1926.65(b)(4), and those described below, shall be addressed in the SSHP. Where the use of a specific topic is not applicable to the project, provide a negative declaration to establish that adequate consideration was given the topic, and give a brief justification for its omission.

3.2.1 **Site Description and Contamination Characterization.** Describe the location, topography, and approximate size of each site, the on-site jobs/tasks to be performed, and the duration of planned site activities. Compile a complete list of the contaminants found or known to be present in site areas to be impacted by the work to be performed. Include chemical names, concentration ranges, media in which found, applicable regulatory clean-up levels, locations on-site, and estimated quantities/volumes to be impacted by site work, if known.

3.2.2 **Hazard/Risk Analysis.** Identify the chemical, physical, biological, and safety hazards of concern for each site task and/or operation to be performed. Selection of chemicals as indicators of hazard shall be based on media concentrations, toxicity, volatility or potential for air entrainment at hazardous levels, and frequency of detection. Describe chemical and physical properties of selected contaminants, sources and pathways of employee exposures, anticipated on and off-site exposure level potentials, and regulatory (including Federal, State, and local) or recommended protective exposure standards. Specify and justify "action levels" based upon potential airborne exposures and direct skin contact. Action levels for upgrades/downgrades in levels of personnel protection, implementation of engineering and/or work practice controls, emergency evacuation of on-site personnel, and for the prevention and/or minimization of public exposures to hazards created by site activities shall be identified. Air monitoring/sampling shall be performed in accordance with Paragraph 3.2.8 : "Exposure Monitoring/Air Sampling Program" below, the resulting data compared with established "action levels", and appropriate corrective actions initiated as necessary.

3.2.3 **Accident Prevention.** The SSHP shall be an appendix attached to the Accident Prevention Plan (APP) and activity hazard analyses, required by F.A.R. Clause 52.236-13, and Section 1 and Figure 1-2 of USACE EM 385-1-1 (2003). The activity hazard analysis is an ongoing process from initiation of plan preparation through the implementation and completion of the field work. This is especially true under the Rapid Response Contracts. Therefore, the activity hazard analysis shall consist of two specific phases, the first of which shall be detailed in the SSHP submittal process to meet the intent of 29 CFR 1926.65 and paragraph 3.2, "Contractor Site Safety and Health Plan" of this section. The activity hazard analyses shall be outlined and developed to the full extent possible prior to SSHP submittal. Any required additions to the activity hazard analyses as required by the APP shall be developed on-site by the Contractor's supervisory staff prior to beginning any specific activity and incorporated into the SSHP on an ongoing basis throughout the duration of the field activities. Daily safety and health inspections shall be conducted to determine if operations are being performed in accordance with the SSHP, USACE and OSHA regulations, and contract requirements. In the event of an accident/incident, the Contractor shall immediately notify the CO. Within two (2) working days of any reportable accident, the Contractor shall complete and submit to the CO an Accident Report on ENG Form 3394 in accordance with AR 385-40 and USACE Supplements to that regulation.

3.2.4 **Staff Organization, Qualifications, and Responsibilities.** Discuss the organizational structure, including lines of authority (chain of command), and overall responsibilities of the contractor and all subcontractors for site activities, including supervisor/employee relationships. Summarize the operational and health and safety responsibilities and qualifications of each key person identified. Specifically: (1) A Certified Industrial Hygienist (CIH) with experience in hazardous waste site operations shall be responsible for the development, implementation, and oversight of the Safety and Health Program and SSHP. The SSHP shall be signed and dated by the CIH prior to submittal; (2) A fully trained and experienced Site Safety and Health Officer (SSHO), responsible to the contractor and the CIH, may be delegated to implement and continually enforce the safety and health program and site-specific plan elements on-site; and (3) At least two persons certified in first aid/CPR by the Red Cross, or equivalent agency, shall be continuously present on-site during site operations.

3.2.5 Training. All personnel performing on-site activities shall have completed applicable training in accordance and compliance with 29 CFR 1926.65(e). In addition, site-specific training covering site hazards, procedures, and all contents of the approved SSHP shall be conducted by the SSHO for on-site employees and visitors prior to commencement of work or entering the site. The type, duration, and dates of all employee training performed shall be listed by employee name and certified in the SSHP.

3.2.6 Personal Protective Equipment (PPE). In accordance with 29 CFR 1926.65(g)(5), a written Personal Protective Equipment (PPE) program which addresses all the elements listed in that regulation, and which complies with respiratory protection program requirements of 29 CFR 1910.134 is to be included in the Safety and Health Program. Therefore, the SSHP shall detail the minimum PPE ensembles (including respirators) and specific materials from which the PPE components are constructed for each site-specific task/operation to be performed, based upon the hazard/risk analysis performed above. When preparing PPE ensembles for protection against highly toxic or mobile chemicals, list any pertinent material breakthrough times, as provided by the PPE manufacturer. Components of levels of protection (A, B, C, D and modifications) must be relevant to site-specific conditions, including heat stress potential and safety hazards. Include site-specific procedures for on-site fit-testing, cleaning, maintenance, inspection, and storage.

3.2.7 Medical Surveillance. All personnel performing on-site activities shall be participants in an ongoing medical surveillance program, meeting the requirements of 29 CFR 1926.65 and ANSI Z-88.2. A description of the general medical surveillance program is to be included in the Safety and Health Program. All medical surveillance protocols and examination results shall be reviewed by a licensed physician who is certified in Occupational Medicine by the American Board of Preventative Medicine, or who, by necessary training and experience, is Board-eligible. The SSHP shall only describe the content and frequencies of any additional medical tests, examinations, and/or consultations determined necessary by the physician due to probable site-specific conditions, potential occupational exposures, and required protective equipment. Certification of participation in the medical surveillance program, the date of last examination, and name of reviewing occupational physician shall also be included for each affected employee. The written medical opinion from the attending physician required by 29 CFR 1926.65(f)(7) shall be made available upon request to the CO for any site employee.

3.2.8 Exposure Monitoring/Air Sampling Program **(Personal and Environmental).** Where it has been determined that there may be employee exposures to and/or off-site migration potentials of hazardous airborne concentrations of hazardous substances, appropriate direct-reading (real-time) air monitoring and integrated (time-weighted average (TWA)) air sampling shall be conducted in accordance with applicable regulations (OSHA, EPA, State). Both air monitoring and air sampling must accurately represent concentrations of air contaminants encountered on and leaving the site. Sampling and analytical methods following NIOSH (for on-site personnel and site perimeter locations) and/or EPA (for site perimeter or off-site locations) criteria shall be appropriately utilized. Personnel samples shall be analyzed only by laboratories successfully participating in and meeting the requirements of the American Industrial Hygiene Association's (AIHA) Proficiency Analytical Testing (PAT) or Laboratory Accreditation programs. Meteorological monitoring shall be performed on-site as needed and used as an adjunct in determining perimeter and any off-site monitoring/sampling locations. Where perimeter monitoring/sampling is not deemed necessary, provide a suitable justification for its exclusion. Noise monitoring and radiation monitoring (alpha, beta, gamma) shall be conducted as needed, depending on the site hazard assessment. All monitoring/sampling results shall be compared to "action levels" established pursuant to Paragraph 3.2.2 : "Hazard/Risk Analysis", above, to determine acceptability and need for corrective action.

3.2.9 Heat and Cold Stress Monitoring. Heat and/or cold stress monitoring protocols shall be implemented, as appropriate. Work/rest schedules shall be determined based upon ambient temperature, humidity, wind speed (wind chill), solar radiation intensity, duration and intensity of work, and protective equipment ensembles. Minimum required physiological monitoring protocols that will affect work schedules shall be developed. In cases where impermeable clothing is worn (full-body), the NIOSH/OSHA/USCG/EPA "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities" protocol for prevention of heat stress shall be followed, and heat stress monitoring shall commence at temperatures of **70 degrees Fahrenheit and above.** Where impermeable clothing is not worn, the most current published ACGIH heat stress standard (TLV) shall be used. For cold stress monitoring to

help prevent frostbite and hypothermia, the most current published ACGIH cold stress standard shall be referenced and followed, as a minimum.

NOTE: If either heat or cold stress is not anticipated due to the season or local climate, provide a negative declaratory statement as mentioned in section 3.2.

3.2.10 Standard Operating Safety Procedures, Engineering Controls and Work Practices. Address the following elements as a minimum: (1) Site rules/prohibitions (buddy system, eat/drink/smoking restrictions, etc.); (2) Material handling procedures (soils, liquids, radioactive materials); (3) Drum/container handling procedures and precautions (opening, sampling, overpacking); (4) Confined space entry procedures; (5) Hot-work, sources of ignition, and electrical safety (ground-fault protection, overhead power line avoidance, etc.); (6) Excavation safety; (7) Machine guarding; (8) Fall protection; (9) Illumination; (10) Sanitation; and (11) Engineering controls.

3.2.11 Site Control Measures. Include site map(s) containing work zone delineation and access points. Describe on-site and off-site communications, security (physical and procedural), and general site access.

3.2.12 Personal Hygiene and Decontamination. Specify necessary facilities and their locations. Detail standard operating procedures, frequencies, supplies and materials to accomplish decontamination of site personnel.

3.2.13 Equipment Decontamination. Specify necessary facilities, equipment, and their locations. Detail procedures, frequencies, supplies and materials, and methods to determine adequacy for the decontamination of equipment used on-site.

3.2.14 Emergency Equipment and First Aid Requirements. The following items, as appropriate, shall be immediately available for on-site use: (1) First aid equipment and supplies approved by the consulting MD; (2) Emergency eyewashes/showers (comply with ANSI Z-358.1, 1910.151(c)); (3) Emergency respirators (worst-case appropriate); (4) Spill control materials and equipment; and (5) Fire extinguishers **(specify type- i.e., 10 B/C , size, locations).**

3.2.15 Emergency Response and Contingency Procedures **(On-Site and Off-Site).** This section of the SSHP shall contain an Emergency Response Plan in compliance with 29 CFR 1926.65(l), which addresses the following elements, as a minimum: **(1)** Pre-emergency planning and procedures for reporting incidents to appropriate government agencies for potential chemical exposures, personal injuries, fires/explosions, environmental spills and releases, discovery of radioactive materials; **(2)** Personnel roles, lines of authority, communications; **(3)** Posted instructions and a list of emergency contacts: (physician, nearby medical facility, fire and police departments, ambulance service, federal/state/local environmental agencies, CIH, Contracting Officer); **(4)** Emergency recognition and prevention; **(5)** Site topography, layout, and prevailing weather conditions; **(6)** Criteria and procedures for site evacuation (emergency alerting procedures/employee alarm system, emergency PPE and equipment, safe distances, places of refuge, evacuation routes, site security and control); **(7)** Specific procedures for decontamination and medical treatment of injured personnel; **(8)** Route maps to nearest pre-notified medical facility; **(9)** Criteria for initiating community alert program, contacts, and responsibilities; and **(10)** Critique of emergency responses and follow-up.

3.3 Logs, Reports and Recordkeeping. The following logs, reports, and records shall be developed, maintained, and submitted to the CO at the conclusion of the site work: (1) Training logs (site-specific, visitor); (2) Daily safety inspection logs (may be part of the Daily QC Reports); (3) Employee/visitor register; (4) Environmental and personal exposure monitoring/sampling results.

4. Document Revisions, Addenda, and Field Modifications. Review comments issued prior to SSHP approval shall be incorporated by revising and reissuing affected pages. If major revisions are necessary, the entire Plan shall be resubmitted for review and approval. Minor changes affecting only a few pages may be made by addenda sheets and resubmitted. Once on-site, unanticipated field conditions encountered which were not addressed in the approved SSHP shall be immediately reported to the CO. Field activities in such areas shall be halted until the SSHP has been modified

to reflect changed conditions and reviewed/approved by the CO.

5. **CO-Approved Visitors**. The Contractor shall continuously maintain on-site a minimum of four (4) sets of protective equipment (except for air-purifying respirators, prescription safety glasses, and safety shoes) for government visitor usage. These ensembles shall include all PPE specified in the SSHP. If protective clothing is included, at least one set shall be size X-large.

6. **Special Considerations**. **(A)** All site workers shall receive pre- and post-biological monitoring for lead, as detailed in the OSHA lead standard (29 CFR 1926.62). **(B)** Handwashing facilities shall be available and employees shall wash hands and face prior to leaving the site. If employee exposure to lead exceeds the PEL, showers shall be available and used prior to leaving the site. **(C)** Water misting of the excavated area shall be provided to minimize particulate emissions.

Appendix C
Chemistry Instructions

SAMPLING AND ANALYSIS

Vasquez Boulevard I-70
Denver, CO

CHEMISTRY INSTRUCTIONS
March 12, 2004

1 Contractor Sampling and Analysis Plan. This appendix describes the Contractor's responsibilities with respect to the sampling and analysis entailed in this work effort. This shall include any sampling and analytical testing required by State of Colorado and Federal regulations as well as potential disposal facilities. The Contractor shall be responsible for the amendment/updating and implementation (upon USACE approval) of the Sampling and Analysis Plan, consisting of a Field Sampling Plan and Quality Assurance Project Plan. The SAP is intended to be a site-specific guidance for the project team for the required sampling and analysis. The SAP shall detail all field activities, laboratory activities, and documentation related to the chemical data. The SAP shall include a list of equipment to be taken to the field, details of the sampling locations and methodologies including field screening methods to be employed, decontamination procedures, quality control procedures, sample custody and shipments information, analytical methods, and all additional items described within this appendix and other portions of this scope. Number and types of samples and bottle/preservation requirements shall be presented in tabular form.

2 Project Sampling and Analysis Requirements. Although not specifically mentioned in the following paragraphs the sampling shall include 10% Field duplicates 5% spike/spike duplicate samples.

2.1 Garden and Flowerbed Sampling. At the direction of USACE, the contractor shall sample designated gardens and/or flowerbeds to determine if the lead and arsenic levels are below the action levels and may be excluded from the removal action. Two 0-12 inch depth grab samples shall be collected from each garden or flowerbed and composited into a single sample for analysis by SW-846 Method 6010.

2.2 Disposal Analysis. One composite sample will be collected for every twenty residential properties. The composite sample will be prepared by randomly selecting four of the properties for sampling. At each property sampled, the planned excavation area will be divided into four approximately equal areas

sampling unites. Soil cores from the 0-12 inch depth will be retrieved from the approximate center of each unit and thoroughly blended. These samples shall also be used for soil classification. The required analysis is as follows:

TCLP RCRA Metals	1311/6010&7000's
TCLP VOC	1311/8260
TCLP SVOC	1311/8270
TCLP Pest/Herb	1311/8081, 8150
Soil Classification	ASTM D2488

2.3 Backfill Material. Any material brought on site for use as backfill shall be sampled at a rate of one composite sample per source area or one per 5000 yards which ever is more frequent.

TAL Metals	6010&7000's
TCL VOC	8260
TCL SVOC	8270
TCL Pest/PCB's	8081/8082
Soil Classification	ASTM D2488

2.4 Wastewaters. All wastewater generated shall be containerized and analyzed for disposal only. The required analysis shall be coordinated with the local POTW and other potential disposal facilities. If the wastewater exceed the acceptance criteria of the above facilities, the Contractor shall consider filtration of the wastewater prior to disposal, which shall require the Contractor to resample the wastewater for those parameters which exceed the criteria (anticipated to be lead and arsenic only).

TAL Metals	6010&7000's
TCL VOC	8260
TCL SVOC	8270
TCL Pest/PCB's	8081/8082
Oil and Grease	413

3 Decontamination.

3.1 Decontamination Procedures. All sampling equipment shall be disposable, stainless steel, or Teflon and shall undergo decontamination procedures as follows (except disposable):

3.1.1 Non-phosphate laboratory detergent wash and brushing to remove large particles;

3.1.2 A tap water rinse;

3.1.3 A double deionized water rinse.

4 Sample Handling, Preservatives, and Holding Times. The samples for off-site chemical analysis are to be placed in appropriately labeled sample containers, preservatives added (if required), enclosed within a plastic ziplock bag, and placed in a chilled cooler. Once the samples for the day are acquired, the required paperwork shall be completed, the cooler packed with fresh coolant and packing material, custody seals attached, the samples shall be shipped or delivered to the designated laboratory. Sample packaging, shipping, and chain-of-custody shall follow all applicable USEPA, USACE and State of Colorado guidelines, and shall be detailed in the SAP. No sample shall be held on site for more than twenty-four (24) hours.

5 Documentation. The system for identifying and tracking the samples shall be described, and shall include the recording of field data in permanently bound notebooks along with Daily Quality Control Reports. These shall be faxed to the USACE PM on a weekly basis or at the conclusion of each sampling event.

6 Sample Labels. Correct sample labeling and the corresponding notation of the sample identification numbers in the field logbook are necessary to prevent misidentification of samples and their eventual results. The SAP shall explicitly define the numbering system to such detail that sample results may be tracked to the corresponding field samples. Special care must be give to the numbering of the field duplicates as to keep them blind to the laboratory. All sample labels shall be filled out legibly with indelible ink, affixed to the sample bottle, and covered with clear tape. These labels are to include the following at a minimum:

6.1 Name/initials of the collector;

6.2 Date and time of collection;

6.3 Place of collection;

6.4 Sample ID number (must uniquely identify each sample in regard to project, station location, etc.);

6.5 Analysis required;

6.6 Preservatives added;

6.7 Designation between "grab" or "composite" samples.

7 Chain-of-Custody/Sample Shipment. Chain-of-Custody shall be maintained for all samples collected during this project. It is very important that the information on the Chain-of-Custody form

match the information on the sample bottles. Chain-of-Custody forms shall be completed for every cooler, and shall be sealed in a zip-lock bag and taped to the inside of the lid of the cooler. A minimum of two signed custody seals will be required on the outside of the coolers, one on the front and one on the rear of the cooler both covered with clear tape. Chain-of-Custody procedures shall be in accordance with USACE Sample Handling Protocol and USEPA procedures. All samples shall be shipped via overnight delivery or hand delivered to the receiving laboratory. The Contractor shall define, in the SAP, the name, address, telephone number, and a POC at the laboratory which will be utilized for the analysis of the samples. The receiving laboratory shall be notified by the Contractor approximately 1 week prior to the arrival of the first sample shipment and at least twenty-four (24) hours notice given for Saturday delivery.

8 Analytical. An appropriate analytical protocol shall be proposed by the Contractor for the samples. The methods to be used, along with appropriate digestion/extraction methods, must be specified in the SAP unless otherwise approved by the Corps of Engineers. These methods must be EPA-approved and consistent with any applicable State of Colorado requirements. These methods must be followed explicitly including all quality control procedures detailed in the respective methods unless otherwise authorized by the Corps of Engineers. All data packages shall be comparable to CLP Level IV packages.

9 Method Detection Limits. Detection limits for the analyses shall be according to applicable EPA methodologies or Standard Methods unless otherwise stated. Detection limits shall be summarized in the SAP. Data reports shall also list specific detection limits for constituents analyzed.

10 Calibration Procedures/Frequency. Calibration of the analytical instrumentation to be used for this project is to be outlined in the SAP. Calibration requirements and the frequency associated with them shall be in accordance with the individual methods.

11 Laboratory Quality Control. The Contractor shall perform the quality control procedures as described in the reference methods. This includes reagent blanks, laboratory replicates, matrix spikes and duplicates, and surrogate standards. If acceptable windows (as outlined in SW-846 for matrix spike/surrogate recoveries are not met in the first analytical run, the laboratory shall be responsible to rerun the sample to prove matrix affects at no expense to the government. The Contractor shall summarize windows of acceptability for spikes/surrogates and actions to be taken in

the event of out-of-control situations in the SAP. The SAP shall describe in detail the laboratory QC procedures including specific compounds and their performance criteria.

12 Laboratory Turn Around Time. The Contractor shall require no longer than a 30 day turn around time (from receipt of samples) for the analytical results from the laboratory. To avoid down-time at the site, quick turn-around-time may be warranted. Any quick turn-around-times used shall be proposed within the SAP.

13 QA/QC Problems. All QA/QC problems in the field or in the laboratory shall be reported immediately to the USACE on-site Construction Representative and to the USACE Project Engineer within twenty-four (24) hours.

14 Data Assessment and Evaluation. Data assessment and evaluation for this project shall be performed by the Contractor. A plan for this activity shall be proposed in the required SAP. Data, including all quality control information, are to be reported on forms as presented in SW-846 (third edition).

Appendix D
Wage Rates

Attached is the most current rate for Denver, Adams, Arapahoe, and Weld Counties, Colorado (CO030012, Heavy, dated 3-5-2004).

The covered area is Denver-Boulder Co. SMSA-2080, of which Denver, Adams, and Arapahoe Counties are a part.
Minority percentage for Denver, Adams, and Arapahoe Counties is 13.1 percent.
The covered area is Greeley, CO, SMSA-3060 for Weld County, CO.
Minority percentage for Weld County is 13.1 percent.
Female percentage for all counties is 6.9 percent.

General Decision Number: CO030012 03/05/2004 CO12

Superseded General Decision Number: CO020012
State: Colorado
Construction Types: Heavy

Counties: Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo and Weld Counties in Colorado.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	06/13/2003
1	08/15/2003
2	09/19/2003
3	10/03/2003
4	12/05/2003
5	01/16/2004
6	02/20/2004
7	03/05/2004

ASBE0028-001 01/01/2004

	Rates	Fringes
Asbestos Workers/Insulator (Includes application of all insulating materials, protective coverings, coatings and finishings to all types of mechanical systems)	$ 19.47	6.25

BRCO0007-006 10/01/2003

ADAMS, ARAPAHOE, BOULDER, DENVER, DOUGLAS, EL PASO, JEFFERSON, AND PUEBLO COUNTIES

	Rates	Fringes
Bricklayer	$ 20.02	8.20

CARP2834-001 05/01/2003

	Rates	Fringes
Millwright	$ 24.49	6.66

ELEC0012-004 09/01/2003

PUEBLO COUNTY

	Rates	Fringes
Electrician	$ 18.98	8.44

Electrical work where the total cost is $200,000 or less

Electricians:	$ 24.74	8.44

Electrical work where the total cost is over $200,000

ELEC0068-001 12/01/2003

ADAMS, ARAPAHOE, BOULDER, DENVER, DOUGLAS, JEFFERSON, LARIMER,
AND WELD COUNTIES

	Rates	Fringes
Electrician	$ 27.91	9.48

ELEC0111-001 09/01/2002

	Rates	Fringes
Line Construction:		
Groundman	$ 14.05	20.75%+2.30
Lineman	$ 27.36	20.75%+2.30

ELEC0113-002 06/01/2003

EL PASO COUNTY

	Rates	Fringes
Electrician	$ 24.54	3%+11.20

---

* ELEC0969-002 12/01/2003

MESA COUNTY

	Rates	Fringes
Electrician	$ 18.40	7.20

ENGI0009-001 05/01/2003

	Rates	Fringes
Power equipment operators:		
Blade: Finish	$ 20.47	6.22
Blade: Rough	$ 20.17	6.22
Bulldozer	$ 20.17	6.22
Cranes: 50 tons and under	$ 20.32	6.22
Cranes: 51 to 90 tons	$ 20.47	6.22
Cranes: 91 to 140 tons	$ 20.62	6.22
Cranes: 141 tons and over	$ 21.38	6.22
Forklift	$ 19.82	6.22
Mechanic	$ 20.32	6.22
Oiler	$ 19.47	6.22
Roller: Self-propelled, all types over 5 tons	$ 20.17	6.22
Roller: Self-propelled, rubber tires under 5 tons	$ 19.82	6.22
Scraper: Single bowl under 40 cubic yards	$ 20.32	6.22
Scraper: Single bowl, including pups 40 cubic yards and over and tandem bowls	.$ 20.47	6.22
Trackhoe	$ 20.32	6.22

IRON0024-003 08/01/2002

	Rates	Fringes
Ironworkers: Structural	$ 22.00	7.61

LABO0086-001 05/01/2003

	Rates	Fringes
Laborers:		
Pipelayer	$ 16.29	4.25

PLUM0003-005 01/01/2004

ADAMS, ARAPAHOE, BOULDER, DENVER, DOUGLAS (Northern half), JEFFERSON, LARIMER AND WELD COUNTIES

	Rates	Fringes
Plumber	$ 27.52	7.11

PLUM0020-002 07/01/2003

PUEBLO COUNTY

	Rates	Fringes
Plumbers and Pipefitters		
Free Zone - 0 to 40 miles	$ 20.10	7.57

Zone 1 - 40 miles and over: $19.85 per hour + $32.00 per day per diem will be paid on projects over 40 miles (Zone 1) measured in practical driving miles by the shortest route, beginning at 5th and Main Streets in Pueblo, Colorado, when the employee stays overnight or drives their own vehicle.

Hazardous pay: Add $2.20 per hour to base rate. Hazardous pay applies to projects at chemical plants, steel mills, cement plants, power generator plants, process piping at manufacturing plants, food processing plants, and all projects which may present a health hazard or serious personal injury.

PLUM0058-002 07/01/2003

EL PASO AND DOUGLAS (Southern half) COUNTIES

	Rates	Fringes
Plumbers and Pipefitters	$ 24.95	7.90

PLUM0145-002 05/01/2003

MESA COUNTY

	Rates	Fringes
Plumbers and Pipefitters	$ 21.53	6.95

PLUM0208-004 01/01/2004

ADAMS, ARAPAHOE, BOULDER, DENVER, DOUGLAS (Northern half), LARIMER AND WELD COUNTIES

	Rates	Fringes
Pipefitter	$ 27.47	7.21

SHEE0009-002 07/01/2003

	Rates	Fringes
Sheet metal worker	$ 26.59	9.70

SUCO2001-006 12/20/2001

	Rates	Fringes
Boilermaker	$ 17.60	
Carpenters:		
All Other Work	$ 15.14	3.37
Form Building and Setting	$ 16.97	2.74
Cement Mason/Concrete Finisher	$ 17.31	2.85
Ironworker, Reinforcing	$ 18.83	3.90

Laborers:		
Common.....	$ 11.22	2.92
Flagger.....	$ 8.91	3.80
Landscape.....	$ 12.56	3.21
Painters:		
Brush, Roller & Spray...	$ 15.81	3.26
Power equipment operators:		
Backhoe.....	$ 16.36	2.48
Front End Loader.....	$ 17.24	3.23
Skid Loader.....	$ 15.37	4.41

TEAM0435-001 05/01/2000

	Rates	Fringes
Truck drivers:		
Pickup.....	$ 14.21	5.27
Tandem/Semi and Water.	$ 14.93	5.27

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations

Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an

interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

Appendix E
Project Forms

RAPID RESPONSE DAILY WORK ORDER

Primary Contractor's Name:		
Contract Number:		
Site Name & Location:		
Report #:	Delivery Order #:	Date:
Subcontractor(s):		
Government agencies on-scene:		

INSTRUCTIONS

The contractor shall attach this form to the rapid response quality control daily report and it shall be submitted daily at the close of business to the on-site COE representative. Concurrently, the contractor shall provide electronic access to the completed forms to the COE district office and the area office.

1. Description of work to be performed by contractor(s), with an estimate of the percentage to be completed:

2. Number of personnel authorized to perform work on site and off site:

Supervisors_____	Foremen _____
Engineers _____	Technicians_____
Geologists _____	Operators _____
Chemists _____	Laborers _____
EMT _____	Safety _____

Others (specify):

RAPID RESPONSE DAILY WORK ORDER - CONT'D.

3. Equipment and expendable materials authorized:

Item	Quantity	Duration	Item	Quantity	Duration

4. Tests and/or inspections to be performed (indicate type and location):

5. Additional comments/remarks:

6. Certification: I CERTIFY THAT THE ABOVE WORK IS ORDERED AND AUTHORIZED BY THE ON-SITE COE REPRESENTATIVE IN THE PERFORMANCE OF THE ABOVE-CITED CONTRACT.

_____

On-site COE representative

RAPID RESPONSE DAILY WORK ORDER - CONT'D.

7. I ACKNOWLEDGE RECEIPT OF THIS WORK ORDER AND UNDERSTAND THAT ANY MODIFICATION TO THE WORK ORDER MUST BE IN WRITING AND APPROVED BY THE PROJECT MANAGER.

_____
Contractor's representative

8. Work order amendments and modifications (include time, description, and authorizing person):

_____ _____
On-site COE representative Contractor's representative

RAPID RESPONSE QUALITY CONTROL DAILY REPORT

Contractor's Name:
Contract Number:
Site Name & Location:

INSTRUCTIONS

The contractor shall submit this form daily at the close of business to the on-site COE representative. Concurrently, the contractor shall provide electronic access to the completed forms to the COE district office and the area office.

Report #:	Delivery Order #:	Date:
Weather:	Temp. (max & min):	Rainfall (in):

2. Work performed by subcontractors on site and/or off site (include a complete description):

3. Complete and attach the daily personnel cost report at the end of this document and label as Appendix 1.

The daily personnel cost report is required for all cost reimbursable work on site and off site including subcontractors. At a minimum, the cost report shall provide: report title, site name, contractor, contract number, delivery order number, date, employee name and classification, hourly labor rates (regular, overtime or other), total hours (regular, overtime or other) and per diem. Labor costs shall be summed for: each employee, the entire daily report, the entire delivery order (up to the date of the report), and the percentage of the estimated cost of labor.

4. On-site conditions which resulted in delayed progress:

RAPID RESPONSE QUALITY CONTROL DAILY REPORT - CONT'D.

5. Type and results on inspections (indicate whether: P-Preparatory, I-Initial, or F-Final and include satisfactory work completed or deficiencies with action to be taken):

6. List type and location of tests performed and results:

7. List verbal instructions received from government personnel on any deficiencies or retesting required:

RAPID RESPONSE QUALITY CONTROL DAILY REPORT - CONT'D.

8. Complete and attach the daily equipment cost report at the end of this document and label as Appendix 2.

The daily equipment cost report is required for all cost reimbursable work on site and off site including subcontractors. At a minimum, the cost report shall provide: report title, site name, contractor, contract number, delivery order number, date, equipment type and identification number, hours in service, hours standby, hours idle time, cost rate, and days in service. Equipment costs shall be summed for: each type, the entire daily effort, the entire delivery order (up to the date of the report), and the percentage of the estimated cost of equipment.

9. List the total number of samples collected and tested for the day:

Collected: Tested:

Amplifying info:

10. List the total quantity of wastewater treated (gal):

11. List the total number of drums overpacked:

Quantity	Location	Haz-Cat

12. List the total amount of waste(s) removed from the site:

Liquid (bbl/gal): Solids (yds/tons):

Amplifying info:

RAPID RESPONSE QUALITY CONTROL DAILY REPORT - CONT'D.

13. List the following transportation and/or disposal information:

Quantity	I.D. #	Material	Manifest #	Disposal Location

14. Complete and attach the daily material cost report at the end of this document and label as Appendix 3.

The daily material cost report is required for all cost reimbursable work on site and off site including subcontractors. At a minimum, the cost report shall provide: report title, site name, contractor, contract number, delivery order number, date, material purchased, quantity and units, location of material, and vendor. Material costs shall be summed for: each purchase, the entire daily effort, the entire delivery order (up to the date of the report), and the percentage of the estimated cost of materials.

15. List all safety violations observed and corrective actions taken:

16. List any credits and/or adjustments due to the government (reference invoice number, conversations, etc.):

RAPID RESPONSE QUALITY CONTROL DAILY REPORT - CONT'D.

17. Complete and attach the rapid response daily work order at the end of this document and label as Appendix 4.

The daily work order is required for all cost reimbursable work on site and/or off site including subcontractors. This document details the contractor's next day work effort which shall have advance approval by the on-site COE representative before the contractor is entitled to cost reimbursement.

18. Additional comments/remarks:

19. Certification: I CERTIFY THAT THE ABOVE REPORT IS COMPLETE AND CORRECT AND THAT I, OR MY AUTHORIZED REPRESENTATIVE, HAVE INSPECTED ALL WORK PERFORMED THIS DAY BY THE PRIMARY CONTRACTOR AND EACH SUBCONTRACTOR AND HAVE DETERMINED THAT ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP ARE IN STRICT COMPLIANCE WITH THE PLANS AND SPECIFICATIONS, EXCEPT AS NOTED ABOVE.

_____

Contractor's designated quality control representative

OMAHA DISTRICT RAPID RESPONSE WEEKLY REPORT

Project Name:	For Week Ending:
Project Location:	Report #:
Name:	Title:
Company Name & Address:	
Phone: ( )	Fax: ( )
Reporting Period: to	
Percent field work completed:	
Percent project completed:	
Summary of work completed on site:	
Summary of work completed off site:	

OMAHA DISTRICT RAPID RESPONSE WEEKLY REPORT - CONT'D.

Explanation of deviation from work plan (including modifications and schedule slippages):

Problems encountered:

Recommendations:

Key personnel changes:

OMAHA DISTRICT RAPID RESPONSE WEEKLY REPORT - CONT'D.

Work anticipated to be performed the following week:

Unit price quantities reached to date:

Unit Priced Item	Unit	Quantity to Date	Quantity Anticipated

Other remarks:

Signature: